

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Entry of the amendments is proper under 37 CFR §1.116, because the amendments place the application in condition for allowance, and do not raise any new issue requiring further search and/or consideration. The amendments are necessary and were not earlier presented, because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

Claims 1 and 4-16 were pending in this application when examined.

Claim 1 has been amended to recite that the hardenable termite-controlling composition comprises “a termiticide” from claim 7. As a result, claim 7 has been cancelled, and claim 19 has been amended to further define the termiticide.

I. Claim Rejection Under 35 U.S.C. § 102

The Examiner rejects claims 1, 4-6, 8, 17 and 18 under 35 U.S.C. § 102(b) as being anticipated by Walker et al. (1997). As applied to the amended claims, Applicants respectfully traverse the rejection.

Claim 1 has been amended to recite the features of non-rejected claim 7. Thus, the claimed hardenable termite-controlling composition comprises “a termiticide”.

Walker et al. disclose compressed earth blocks stabilized by adding Portland cement to a mixture comprising clay soil and sand in various ratios (see page 546, “2.1 Constituent materials”). Table 1 of the reference describes soil grading of the clay and sand, and that the clay comprises 25% of the fine gravel fraction (2-6 mm) and the sand comprises 4% of the fine gravel fraction (2-6 mm). However, the reference fails to disclose a **hardenable termite-controlling composition comprising “a termiticide”**, as recited in claim 1.

Therefore, claim 1 is not anticipated by the reference.

Claims 4-6, 8, 17 and 18 depend directly or indirectly from claim 1, and thus also are not anticipated by the reference.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. Claim Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 1 and 4-19 under 35 U.S.C. § 103(a) as being unpatentable over Walker et al. in view of Okada (JP 07-291699), Nishimura et al. (JP 04-51506), Allen et al. (1961), Allen et al. (1964), and Moriwaki et al. (JP 60-230451). As applied to the amended claims, Applicants respectfully traverse the rejection.

Walker et al.

As discussed above, Walker et al. disclose compressed earth blocks stabilized by adding Portland cement to a mixture comprising clay soil and sand in various ratios. Table 1 of the reference describes soil grading of the clay and sand, and that the clay comprises 25% of the fine gravel fraction (2-6 mm) and the sand comprises 4% of the fine gravel fraction (2-6 mm). However, the reference fails to disclose **a hardenable termite-controlling composition comprising “a termiticide”**, as recited in claim 1. In fact, the reference does not disclose or suggest any properties relating to a hardenable **termite-controlling** composition.

Okada

As discussed in the previous response filed March 29, 2010, Okada discloses a termite-controlling concrete comprising a concrete and at least one adsorbent selected from the group consisting of an activated carbon, a zeolite, an activated alumina, and a silica gel and to which a termite-controlling agent is adsorbed” (see claim 1).

Moreover, the reference teaches that, for preparing a concrete, water is added to a gravel (砂利, Japanese appellation “jari”), a sand and a cement, and then the components are mixed. Then, an adsorbent to which a termite-controlling agent is adsorbed and supported is added to the mixture, and the mixture is mixed uniformly before solidification. By such a process, the termite-controlling concrete of Okada is obtained (see paragraph [0025] of the reference).

In addition, as advantages, the reference teaches that the erosion of a house by termites is prevented by the operation of a controlling agent which concrete diffuses, and that an adsorbent can maintain a termite controlling effect for a long period of time as a result of the gradual release operation of the adsorbent (see [Effects of the Invention]).

Nishimura et al.

As discussed in the previous response, Applicants take the position that the reference teaches that the earth floor 6 (a concrete slab on a grade) comprises a time-hardening hardenable material, such as a cement or a mortar concrete, continuously laid between the strip footing 1 and

the bond stone 5 over the under floor ground 3 (page 4, lines 2-5). Further, Applicants take the position that the reference discloses that first the termiticide is mixed in a powder paste composed of a cement and a gravel (砂利, Japanese appellation “jari”) beforehand, and then the mixed powder material 10 is scattered on the under floor ground 3 so that the material can form a predetermined layer.

In addition, the reference teaches that the mixed powder material 10 is sprinkled with water 11 for hardening to form a lower layer 8. After the hardening of the lower layer 8 proceeds to a certain degree, a mixed powder material 12 which contains a humidity-controlling agent and a powder paste composed of a cement and a gravel is scattered on the lower layer 8, as shown in Fig. 3. Then, the mixed powder material 12 is sprinkled with water 13 for hardening to form an upper layer 9 (page 4, line 13 to page 5, line 4).

Moreover, the reference describes the advantages of the invention to be that the underfloor damp-proof structure is extremely effective for both humidity-controlling and termite-controlling of the underfloor, which can be obtained without generating gaps between the strip footing 1 or the bond stone 5 and the earth floor 6 (see [Effects of the Device]).

Allen et al. (1961)

As discussed in the previous response, Allen et al. (1961) disclose that insecticidal treatment of internal voids and cracks in concrete foundations is a standard method of preventing or controlling termite infestations. If such concrete is fabricated with a toxic agent that would cause mortality of termites through contact action, the problem of preventing termite movement over the concrete or through crevices in foundations might be eliminated or reduced (see second paragraph).

Further, the reference discloses that late in the summer of 1960, dieldrin, an insecticide highly toxic to termites, was incorporated into cement mixtures, and that this insecticide was very stable even under highly alkaline conditions (see third paragraph).

The reference further discloses that concrete blocks, approximately 3x5x5 inches in size, containing this insecticide were poured for evaluating contact toxicity to exposed termites. A wettable powder containing 75% dieldrin was added to the water used in the preparation of the concrete. Concentration of dieldrin in the cement mixtures was approximately 0.1% and 1.6% in the cement (w/w). Concrete blocks containing the insecticide were similar to the check blocks except for a darker gray color. One week after fabrication the block surfaces containing 0.1%

dieldrin caused 100% mortality to *R. flavipes* workers exposed for a period of only 1 minute (see fourth paragraph).

Allen et al. (1964)

As discussed in the previous response, Allen et al. (1964) disclose a mixture of dieldrin-water and cement to produce a concrete with a surface that is toxic to termites. The reference discloses that the surface toxicity of the mixtures was reduced during certain storage conditions (26.7°C and 97%RH in the laboratory). The reference states that continuing studies to determine the durability of the toxic residue in concrete under laboratory and field conditions are in progress, and current results of these studies and experiments to evaluate the relative susceptibility of several species of termites to dieldrin-concrete mixtures are described (see page 26, col. 1, 1st paragraph).

Further, the reference discloses that the tests show the results obtained from 4 sets (I, II, III, IV) of dieldrin-concrete blocks prepared with dieldrin, 75% wettable powder in water, and ready-mix cement. Each set consisted of 3 blocks, each approximately 3x5x5 in., one with no dieldrin as a check, the second with 0.1% dieldrin (w/w), and the third, 1.6% (w/w) basis. The concentration of dieldrin in the 0.1% mixture was approximately twice the concentration recommended for treating trenches around building foundations. The high concentrations of dieldrin were selected for persistence in the alkaline condition, pH 12.5, of the freshly mixed concrete. The descriptions of additional sets of mixtures are given in the appropriate sections of this paper (see page 26, col. 1, 2nd paragraph).

Moriwaki et al.

As discussed in the previous response, Moriwaki et al. disclose a process for restraining underfloor humidity comprising treating an underfloor ground of a building with a termiticide, followed by allowing a self-flowing water-hardening composition comprising a hydraulic cement, a water-reducing admixture, a water retention agent, an aggregate, and a water to self-spread (see Abstract).

The Comparison of the Claimed Invention with the Cited References

The cited references fail to disclose “A hardenable **termite-controlling** composition which comprises a hydraulic material, **a termiticide** and a soil, and is in the form of a dust-granule mixture, wherein the soil comprises a gravel component and/or a crushed inorganic waste, and the gravel component and the crushed inorganic waste have a particle size of 2 to 5 mm”, as recited in claim 1.

Walker et al. fail to disclose or suggest a hardenable **termite-controlling** composition **comprising a termiticide**. The other references fail to disclose or suggest the specific particle size of the gravel component and/or crushed inorganic waste to be “2 to 5 mm”.

Although Walker et al. disclose the specific particle size of the gravel component of claim 1, Walker et al. fail to teach or suggest a termiticide or a termite-controlling composition. Termites do not cause damage to a concrete composition, but cause damage to wooden buildings. One would not expect the compressed earth block disclosed in Walker et al. to be damaged by termites, and the reference’s compressed earth block is not intended to control or prevent termite damage.

The Examiner’s combination of Walker et al. with the other cited references is based solely on the teachings of Applicants’ specification. Thus, the combination is clearly based upon hindsight reasoning, which is improper. Therefore, one of ordinary skill in the art would not have had any reason or rationale to combine Walker et al. with the other cited references to obtain a hardenable **termite-controlling** composition comprising a **termiticide**, as recited in claim 1.

Furthermore, one of ordinary skill in the art would not have had any reasonable expectation of success of arriving at the claimed composition having the specific combination of a hydraulic material, a termiticide and a soil, wherein the soil has the specific particle size of the gravel component and/or a crushed inorganic waste of 2 to 5 mm, from the disclosure of Walker et al., because the reference fails to disclose or suggest a termiticide and a composition having termite-controlling properties.

In addition, the claimed invention has unexpected advantages in terms of termite-controlling properties over the art. Termite-controlling effects would not have been expected in view of the compressed earth block disclose in Walker et al. Even if a hardenable termite-controlling composition were to be applied to the compressed earth block of Walker et al., the

composition would not effectively prevent the invasion of termites. Where a composition is laid without sealing the object to be protected (such as wooden buildings), termites can easily invade by traveling along the surface of the object to be protected, passing over the surface of a composition. Moreover, as discussed in the previous response, the compositions disclosed in the other cited references comprise a gravel having a large particle size. Therefore, the termites can easily pass through the structure.

On the contrary, the claimed composition comprises a hydraulic material, a termiticide and a soil, wherein the soil comprises a gravel component and/or crushed inorganic waste **having a specific particle size (2 to 5 mm)**. The specific particle size of the gravel component and/or crushed inorganic waste **prevents termites from easily passing through a structure**. In addition, in the case where the composition is laid without sealing the object to be protected, the **termiticide** existing in the composition kills termites or causes the termites to avoid the structure or other object to be protected. Accordingly, termites cannot invade the structure by traveling along the surface, because of the termite-controlling effect of the claimed composition.

Therefore, one of ordinary skill in the art would not have expected the termite-controlling properties of the claimed invention from the disclosures of the references.

Therefore, claim 1 would not have been obvious over the references.

Claims 4-6 and 8-19 depend directly or indirectly from claim 1, and thus also would not have been obvious over the references.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

For these reasons, Applicants take the position that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the rejections set forth by the Examiner have been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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